

(19) World Intellectual Property
Organization
International Bureau



555304

(43) International Publication Date
23 December 2004 (23.12.2004)

PCT

(10) International Publication Number
WO 2004/110764 A1

(51) International Patent Classification⁷:**B41J 2/05**

(21) International Application Number:

PCT/JP2004/007879

(22) International Filing Date: 1 June 2004 (01.06.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2003-165028 10 June 2003 (10.06.2003) JP

(71) Applicant (for all designated States except US): CANON KABUSHIKI KAISHA [JP/JP]; 3-30-2, Shimomaruko, Ohta-ku, Tokyo 1468501 (JP).

(72) Inventor; and

(75) Inventor/Applicant (for US only): FURUKAWA, Tatsuo [JP/JP]; c/o Canon Kabushiki Kaisha, 3-30-2, Shimomaruko, Ohta-ku, Tokyo 1468501 (JP).

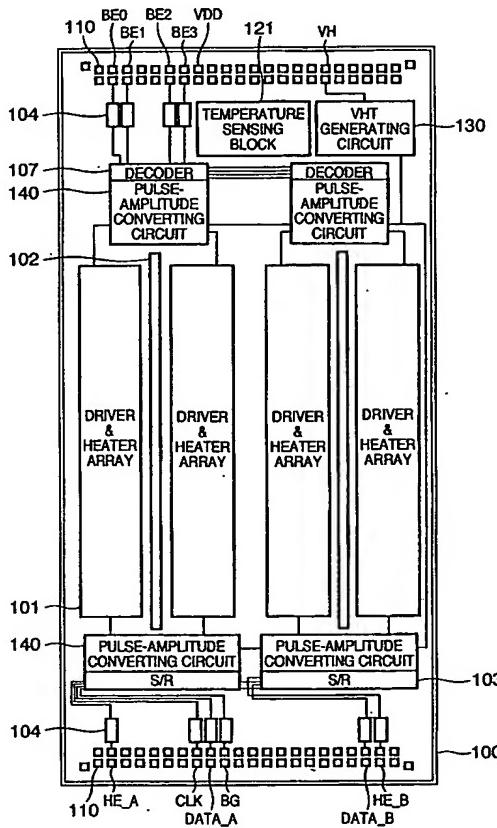
(74) Agent: OHTSUKA, Yasunori; 7th Fl., Shuwa Kioicho Park Bldg., 3-6, Kioicho, Chiyoda-ku, Tokyo 1020094 (JP).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

[Continued on next page]

(54) Title: INK-JET PRINthead SUBSTRATE, DRIVING CONTROL METHOD, INK-JET PRINthead AND INK-JET PRINTING APPARATUS



(57) Abstract: A heater/driver array that includes heaters for generating thermal energy utilized to discharge ink and driver circuits for driving these is mounted on a substrate. The heaters are formed into a plurality of groups and are driven by block drive on a per-group basis. A block selection signal of driving-signal voltage level (VHT) and a heater driving signal corresponding to a selected block are generated based upon a print data signal, which has been input at a logic-signal voltage level (VDD), in any of an input circuit, shift register circuit and decoder circuit. The heater/driver array drives the heaters in accordance with the block selection signal and heater driving signal of the driving-signal voltage level.

WO 2004/110764 A1



SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *with international search report*